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CERTIFICATE OF DELIVERY

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I hereby certify that the below identified Reply is being sent via facsimile this date to Commissioner of Patents and Trademarks, Box PCT, Attention: Alvin Oberley, Authorized officer, on:

Date: 21 August 2000 By: Daniel R. Pote _____
Signature

IN THE UNITED STATES RECEIVING OFFICE
PCT PATENT

Applicant:	InfoImage Inc.	Agent's Docket No.:	32643.0216
International App. No.:	PCT/US99/06126	International Filing Date:	26 March 1999
Priority App(s):	60/079,611	Priority Date:	27 March 1998

FOR: METHODS AND APPARATUS NETWORK APPLICATIONS USING OBJECT TOOLS

REPLY TO WRITTEN OPINION

Box PCT
Commissioner of Patents and Trademarks
Washington, D.C. 20231

Dear Sir:

In Reply to the Written Opinion mailed 21 July 2000 in the above-identified PCT application, please consider the following remarks addressing the Written Opinion.

The International Preliminary Examining Authority (IPEA) indicates in the Written Opinion that claims 1-16 as previously numbered lack an inventive step under PCT Article 33(3) as being anticipated by McInerney et al. ("McInerney".) Applicant respectfully traverses the IPEA's conclusions.

More particularly, the Examiner asserts that, with respect to claim 8:

> McInerney teaches a system (HOOPS) for developing an object-oriented application (program, project) within a software environment (fig. 4) provided on a digital computer, said system comprising: at least one object repository (database 41) for storing objects

(components); an application builder (build mechanism 43, link mechanism 45) configured to allow transfer of said objects from said object repository to said object-oriented application (use compiler generated dependencies to build the program); an application analyzer (error processing) for analyzing said object-oriented application and determining a level of compliance to a predetermined set of design standards (parse/compile, obviously using the language's grammar) as well as object-oriented . . . .

With respect to claim 1, the Examiner states that McInerney "further teaches an object (component) comprises at least one of design elements (interfaces, implementations), dependencies implemented using the design elements (interface dependency, implementation dependency). An object inherently has inbound public interfaces and outbound interfaces for input and output operations."

McInerney discloses a development environment similar to the current generation of Integrated Development Environments (IDEs) which assist the coder with many of the mundane tasks inherent in any large software project.)). In McInerney, for example, the build function improves on the tedious compile/link steps (e.g., the "makefile" used in C and C++) in order to automatically detect and optimize dependencies. The McInerney disclosure deals with "components," a term used to designate a relatively high-level programming unit (comparable to components used in connection with Microsoft's Component Object Model (COM).

Applicant respectfully submits that claims 1 and 8 are not obvious in light of the combination of McInerney and the art of record, because the prior art does not disclose each and every element of the independent claims.

The present invention as claimed deals with creating object-oriented code in a non object-oriented environment. While McInerney discusses in the Background using his invention for procedural languages, it is clear that the invention would only facilitate building object-oriented code using object-oriented components and procedural programs using procedural components. That is, the McInerney invention would assist building C programs by managing dependencies between C functions, types, etc., and would (theoretically) assist building Java programs using Java components, but would not be helpful in creating Java programs which include C "components." Thus, McInerney does not disclose the creation of object-oriented applications using non-object-oriented elements.

McInerney does not disclose the step of determining, for a given object, compliance to a set of design standards. While it is true that McInerney compiles individual segments of code, and this would necessitate comparing the code to a given syntax (e.g., compiling a Java program to bytecode would require a syntax check), this is not the same as checking compliance to a design standard. More particularly, in the present invention the design standards *themselves* are used to implement encapsulation and other OOP characteristics so that the underlying non-object oriented modules benefit from an OOP framework. The design standards are much more than language syntax: they encompass, among other things, the code architecture and naming standards.

Furthermore, the "compiler generated dependencies" of McInerney are not equivalent to the dependencies resulting from the programmer-directed transfer of objects from a repository to the application.

In sum, while McInerney on its face appears to relate to the present invention (mainly due to the use of similar terms such as "builder," "objects," and the like), McInerney attempts to address an entirely different problem - - i.e., the tedious nature of build files and dependencies arising from in large software projects. In contrast, the present invention is directed at leveraging modern object oriented programming techniques in the context of programming platforms which are inherently procedural, functional, or otherwise non-object oriented.

For these and other reasons, Applicant respectfully submits that pending claims 1-16 as originally filed fully satisfy the requirement of inventive step.

In view of the foregoing, Applicant respectfully submits that all of the pending claims fully satisfy the requirements of novelty, inventive step, and industrial applicability. Reconsideration of the application and a favorable disposition is earnestly solicited. The undersigned agent would welcome a telephone call from the Authorized Officer to discuss any of the above in greater detail.

Respectfully submitted,

Date: 21, August 2000

By:

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